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**ABSTRACT**

The document presents guidelines for assessment and evaluation procedures related to development of individual programs in physical education, with emphasis on the provisions of The Education for All Handicapped Children Act (P.L. 94-142) and Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112). Sections address the following topics: assessment, evaluation, and the laws; initial assessment; assessment and evaluation in physical education; general assessment and evaluation provisions under the laws; implications of assessment and evaluation provisions for physical education; assessment batteries, test items, and resources; adapting and using the Youth Fitness Test; Youth Fitness Test and adaptations; motivation and incentives; award systems; testing large groups; and record keeping. (SBH)

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## INDIVIDUAL EDUCATION PROGRAMS: ASSESSMENT AND EVALUATION IN PHYSICAL EDUCATION

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## INDIVIDUALIZED EDUCATION PROGRAMS:

### ASSESSMENT AND EVALUATION IN PHYSICAL EDUCATION

*No equation can define the quality of life,  
No instrument record it, no computer conceive it--  
Only bit by bit can feeling man's love retrieve it.*

Specific purposes of physical education testing programs, assessment procedures, and evaluation strategies in general and under The Education for All Handicapped Children Act (P.L. 94-142) and Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112) in particular include--

- . Providing teachers, leaders, supervisors, parents, aides, attendants, and volunteers with information from which they can assess status of selected elements of motor development, physical fitness, and physical/motor proficiency for each child.
- . Serving as one way to diagnose an individual's specific strengths and abilities, weaknesses and deficiencies and to assess the individual's progress and development on selected elements of motor development, physical fitness, and physical/motor proficiency.
- . Using test results for remedial grouping, diagnostic and prescriptive purposes, for developing annual goals and short term instructional objectives in selected elements of motor development, physical fitness, and physical/motor proficiency for each child and for assessing the degree to which provisions of individualized education programs have been accomplished.
- . Giving students participating in specially designed physical education programs additional incentive to improve their levels of motor performance, physical fitness, and physical/motor proficiency.
- . Stimulating teachers of students receiving special education and related services and agencies serving these populations to upgrade their physical education, recreation, and sports programs.
- . Aiding in determining what comes next in instruction.
- . Determining effectiveness of certain activities, approaches, and methods for each child.
- . Providing a record of growth, development, performance, improvement, and progress for each child.

#### Assessment, Evaluation, and the Laws

Because provisions governing evaluation and assessment are dealt with specifically in rules and regulations for both The Education for All Handicapped Children Act and Section 504 of the Rehabilitation Act, physical educators must deal with--

- . Pre-placement evaluation and assessment.
- . Attainment of annual goals and short-term instructional objectives from each handicapped child's individualized education programs.
- . Reevaluation to determine if changes in program and/or placement are appropriate.

### Initial Assessment

Initial assessment must include procedures to determine levels of function in educational, psychological, medical, sociological, and adaptive behavior areas. Even though the psychomotor domain is not mentioned specifically, it should be an integral part of assessment procedures in one or more of the areas listed above. Since instruction in physical education is a defined part of special education, individualized planning committees are expected to review motor, physical, movement, and fitness needs of each child to determine whether or not specially designed physical education programs are required. Therefore, need to obtain relevant information about physical and motor fitness, fundamental motor skills and patterns, and skills in aquatics, dance, individual and group games and lifetime sports is obvious. Information and results obtained from specific instruments designed to provide information about the child's functional levels and abilities in these areas provide important data about the child's needs, program requirements, and placement potential. This type of information is necessary for developing and evaluating individualized education programs for each child. By law complete reevaluation is required a minimum of every three years. The same factors must be considered in reevaluation procedures as during initial assessment.

### Assessment and Evaluation in Physical Education

Of major concern to physical education teachers, adapted physical education specialists, regular classroom teachers, special education teachers, and others responsible for providing programs designed to meet the physical, motor, and movement needs of children with various handicapping conditions are procedures and processes necessary for successfully conducting day-to-day classes. Since rules and regulations for both P. L. 94-142 and Section 504 deal with evaluation and assessment in general, these criteria must also be interpreted for and applied to assessment procedures designed to determine day-to-day progress in physical, motor, and movement functions. By definition, physical education under P. L. 94-142 consists of the development of--

- . Physical and motor fitness.
- . Fundamental motor skills and patterns.
- . Skills in aquatics, dance, individual and group games and sports including intramural and lifetime sports.



### General Assessment and Evaluation Provisions Under the Laws

Even though each of the defined physical and motor areas is important to the physically educated person, emphasis of this Practical Pointer is upon assessment and evaluation as related to physical fitness. This process, the format, and the approach can be applied to other physical and motor components contained with the definition of physical education.

Rules and regulations for P.L. 94-142 require that tests and other evaluation materials must--

- . Be provided and administered in the child's native tongue or other mode of communication unless it is clearly not feasible to do so.
- . Be validated by trained personnel in conformance with instructions provided by the producer of the instrument.
- . Be tailored to assess specific areas of educational need and not merely those designed to provide a single general intelligence quotient.
- . Be selected and administered so as to best ensure that when a test is administered to a child with impaired sensory, manual, or speaking skills, test results accurately reflect the child's aptitude or achievement level or whatever other factors the test purports to measure rather than reflecting the child's impaired sensory, manual, or speaking skills except where these skills are factors which the test purports to measure.
- . Not be a single procedure as a single criterion for determining an appropriate educational program for a child.
- . Be conducted by a multidisciplinary team or group of persons including at least one teacher or other specialist with knowledge of the area of suspected disability.
- . Deal with all areas related to the suspected disability including where appropriate health, vision, social and emotional status, general intelligence, academic performance, communicative states, and motor abilities.

Individualized education programs require a variety of approaches and techniques. This process can only be as good as the assessment procedures and ways in which evaluation devices are used and results interpreted. A comprehensive assessment approach includes--

- . Informal techniques--observation of student performance, self-testing activities, exploration activities; discussions with students, professionals, and volunteers who work with students; use of rating scales, checklists, inventories, questionnaires, and screening activities.
- . Formal techniques--tests of perceptual-motor functions, coordination, gross motor ability, fine motor skills, physical fitness, cardiorespiratory function, anthropometric characteristics, and specific sport skills.

- . Developmental measures--tests for intelligence, learning ability, academic achievement, social-emotional behavior, speech, perception, adaptive behavior.
- . Tests, examinations, and assessments by specialists--results of evaluations and assessments of specialists made available to those who teach physical education.
- . Individual records--data collected about each child organized for use by personnel involved in physical education programs. Time should be allotted for specialists who have evaluated youngsters to meet together and with teachers to discuss appropriate activities and approaches that will meet individual student needs.

#### Implications of Assessment and Evaluation Provisions for Physical Education

As applied to and adapted for physical education in general and physical fitness in particular, the following chart provides both what is and what is not acceptable in terms of formal assessment devices. As previously indicated, a similar application can be made to other aspects of physical education as contained in the P.L. 94-142 definition of physical education.

##### P.L. 94-142 Provision

##### Application to Physical Education

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>. Be provided and administered in the child's native tongue or other mode of communication unless it is clearly not feasible to do so.</li> </ul> | <ul style="list-style-type: none"> <li>--Give necessary instructions for physical fitness, motor development, skills, and other tests in child's primary language if other than English.</li> <li>--Include other modes of communication as necessary; i.e., sign language for deaf children, Braille or audio-cassette instructions for blind students, pictures for nonverbal students, coaction for deaf-blind individuals, combinations of various methods for multiply involved persons.</li> </ul>   |
| <ul style="list-style-type: none"> <li>Be validated by trained personnel in conformance with instructions provided by the producer of the instrument.</li> </ul>                         | <ul style="list-style-type: none"> <li>--Use physical education, adapted physical education, motor-development specialists, or other personnel with appropriate background, training, and experience in these specific areas in processes by which test batteries and individual test items are validated.</li> <li>--Use same types of personnel as listed above whether process to determine if test instruments and assessment devices measure what they say consists of research or statistical approaches or is determined through face validity procedures.</li> </ul> |

- Be tailored to assess specific areas of educational need and not merely those designed to provide a single general intelligence quotient.
- Use tests designed to assess physical fitness performance for this purpose and not as a means of determining basic motor development or ability in sport skills.
  - Use test items designed to assess function and ability in specific components of physical fitness, gross motor ability, fine motor skill, or sports skills only for that particular purpose--balance test items are not appropriate as indicators of muscular strength or endurance.
  - Make generalizations cautiously; because an individual does well or poorly on a specific test item cannot be interpreted as strength or weakness in more than that particular movement, pattern, or skill.
  - Avoid a single general physical or motor quotient in the same way and for the same reasons a single general intelligence quotient is prohibited.
  - Do not make generalizations or assumptions about physical and motor performances on the basis of categorical information about handicapping conditions. Base decisions about physical and motor needs on appropriate input about physical and motor function.
- Be selected and administered so as to best ensure that when a test is administered to a child with impaired sensory, manual, or speaking skills, test results accurately reflect the child's aptitude or achievement level or whatever other factors the test purports to measure rather than reflecting the child's impaired sensory, manual, or speaking skills except where these skills are factors which the test purports to measure.
- Remove or adapt specific test items that do not reflect an individual's level of physical and motor fitness. fundamental motor skills or patterns or skill in aquatics, dance, individual and group games and sports and lifetime sports but rather how his/her handicapping condition affects achievement and performance in these areas. For example, eliminate carrying and picking up objects on shuttle run for blind students; substitute wheelchair dashes or wheels for sprint, run-walk, and running events as indicators of power or cardiorespiratory endurance; develop balance activities involving crutch use in place of traditional static and dynamic balance activities.

- Not be a single procedure as a single criterion for determining an appropriate educational program for a child.

- Be conducted by a multidisciplinary team or group of persons including at least one teacher or other specialist with knowledge of the area of suspected disability.

- Use a variety of sources and procedures to determine specific physical and motor needs of each child; such as formal and informal devices, quantitative and qualitative measures, objective and subjective data, and observational and anecdotal input are all necessary to determine each child's needs in terms of actual cause and effect relationships. A single procedure promotes attacking symptoms, not basic causes of a problem.
- Use of information obtained solely from a single performance sequence or progression does not provide input about the child's social, emotional, and intellectual factors that can affect physical and motor performances. Often these non-physical and motor factors are more important considerations than physical and motor ability in determining performances in these areas.
- Obtain input from other school personnel and specialists so that the most accurate assessment of why the child has particular physical and motor problems can be determined. Input from regular classroom teachers, special education teacher and resource personnel, physicians, nurses, physical therapists, occupational therapists, recreation and therapeutic recreation specialists can be very helpful in this process.
- Keep focus and emphasis on the child, not the program activity, therapy, or modality.
- Strive to have input from or active participation by physical education personnel or motor development specialists in every individualized planning meeting to foster two way communication regarding physical and motor needs of the child.
- Recognize that a physical educator, adapted physical educator, motor development specialist, or other person with background, training, or experience in the physical motor areas/psychomotor domain must be considered the specialist to provide input about a child's needs in these areas.

- . Deal with all areas related to the suspected disability including where appropriate health, vision, social and emotional status, general intelligence, academic performance, communicative states, and motor abilities.
- Recognize positive and/or negative effects of particular disabilities on physical and motor function and performance in individual children as well as the positive and/or negative effects of physical and motor activities on the disability itself.
- Deal with only those characteristics, traits, and functions which affect the particular activities under consideration.
- Avoid making categorical generalizations based on handicapping conditions.

### Assessment Batteries, Test Items, Resources

Various approaches can be used to meet the stipulation that tests be validated and used for purposes for which they have been developed. For example--

- . Total batteries designed to measure general levels and/or specific components of physical fitness are appropriate. Resources containing physical fitness batteries or information about instruments which can be used effectively with impaired, disabled, and handicapped persons include<sup>1</sup>--
- 1. Adult Physical Fitness. Washington, D. C.: President's Council on Physical Fitness and Sports (sold by Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402).

Well illustrated and clearly defined programs for men and women are outlined which are adaptable for family use, warm-up activities appropriate for all age groups are included.

- 2. Aerobics. Kenneth H. Cooper. New York, New York: M. Evans and Company, Inc., 1968.

Aerobics is an effective, enjoyable physical fitness plan. It is a scientific program of exercise aimed at the overall fitness and health of the individual based on an unique point system for measuring progress.

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<sup>1</sup> See page 11 for information about and contents of Youth Fitness Test, Special Fitness Test for Mildly Mentally Retarded, and Motor Fitness Test for Moderately Mentally Retarded. Special adaptations of the Youth Fitness Test for blind and partially sighted persons can also be found on page 11.



3. Circuit Training. R. E. Morgan and G. L. Adamson. London, England: G. Bell and Sons, Ltd., 1959.

The first complete and authentic account of circuit training ever published. Principles and methods of circuit training, descriptions and photographic illustrations of recommended exercises, and observations on exercise selection and classification, supported by the detailed analysis of individual exercises make up the major part of this book.

4. Fitness and Work Capacity Testing. Brian J. Sharkey. Missoula, Montana: Forest Service, U. S. Department of Agriculture, (Equipment Development Center, Fort Missoula, 59801), July 1977.

Instructions for administering selected muscular and aerobic fitness tests designed to predict a worker's ability to accomplish desired production goals are presented. Additional information explains how the tests are related to work capacity, why each test was selected, how each test was developed, and how a specific level of performance was determined. Aerobic fitness tests include step test or 1½ mile run. Muscular fitness tests include chin-up, bent-leg sit-ups in thirty-seconds, push-ups in sixty-seconds, and pack test. Although developed for use in the Forest Service, procedures make this adaptable for children in general and handicapped children in particular.

5. Fitness for Life--Superstar All Around. Santa Barbara, California: Superstar All Around (P. O. Box 40280, 93103), 1976. \$2.00.

Presents a fun physical fitness program which can be used by anyone, young or old, able-bodied or handicapped. It is suited for individual home use and use by schools and other organizations. Minimal equipment is required and the program is adaptable in many ways--events themselves, scoring, approaches and methods. Each participant obtains a measure of general physical fitness levels through ten specific events through a standardized scoring table based on decathlon scoring approaches.

6. Physical Fitness and Dynamic Health. Thomas K. Curetor. New York, New York: Dial Press (750 Third Avenue), 1965.

Presents a series of simple tests by which fitness can be measured and outlines in carefully illustrated detail a program for getting into top-notch condition. A system of exercises for developing particular parts of the body is included.

7. The Physically Underdeveloped Child: Identification Improving Performance. President's Council on Physical Fitness and Sports. Washington, D. C.: Superintendent of Documents, U. S. Government Printing Office, 1977.

Presents several approaches and screening procedures for identifying physically underdeveloped children. Basic approaches for improving performances through developmental programs are included.

8. Royal Canadian Air Force Exercise Plans for Physical Fitness. Mt. Vernon, New York: This Week Magazine.

This outlines the XBX twelve-minute per day program for women and 5BX eleven-minute per day program for men. Useful aspects of these programs are their progressive matters and the fact that all body areas are included. This is adaptable for total family use and has been used successfully with individuals having different handicapping conditions.

9. Special Olympics Instructional Manual--From Beginners to Champions.

Washington, D. C.: American Alliance for Health, Physical Education, and Recreation (1201 16th Street, N. W., 20036), 1972. \$2.50.

Contains a systematic approach to good health through a progressive and graded physical fitness program.

10. Testing for Impaired, Disabled, and Handicapped Individuals. Washington, D. C.: American Alliance for Health, Physical Education, and Recreation (1201 16th Street, N. W., 20036). \$3.95.

Contains information about physical fitness tests, psychomotor/perceptual motor instruments, and developmental profiles. Contents of this publication offer specific data about other instruments that should be considered and used to determine physical fitness, motor proficiency, and movement needs of students receiving special education services. This publication also provides information to assist in the process of selecting valid items and tasks for assessing proficiency, achievement, and status in specific physical, motor, and movement tasks. Uses and abuses of tests are also discussed.

11. Youth Physical Fitness: Suggestions for School Programs. President's Council on Physical Fitness and Sports. Washington, D. C.: Superintendent of Documents, U. S. Government Printing Office, 1976. \$1.50.

Deals with identification of physically underdeveloped children and procedures designed to improve their performances. Contains activities that can be done individually as well as in class situations. Outlines both screening and diagnostic testing procedures.

Two nationally validated projects contain materials that are appropriate for and can be used for initial assessment, in establishing annual goals and short-term instructional objectives, and to determine individual progress and degree to which provisions in the individualized education program have been accomplished.

- I CAN (Field Service Unit in Physical Education and Recreation for the Handicapped, Michigan State University, East Lansing, Michigan, or Hubbard Scientific Company, P. O. Box 104, Northbrook, Illinois) is an instructional management system designed to assist teachers and leaders individualize instruction through a diagnostic prescriptive teaching model. Criterion referenced materials are appropriate for use in initial assessment, day-to-day evaluation, and post-program testing.

- PROJECT ACTIVE (Township of Ocean School District, Dow Avenue, Oakhurst, New Jersey, 07755) is designed to provide individualized-

personalized physical activity programs for all handicapped students. Publications developed in and distributed through this project include materials designed to help teachers test, assess, prescribe, and evaluate students with various handicapping conditions in terms of their physical and motor needs.

Specific test items designed to measure specific components of fitness, even though taken from different batteries and sources are appropriate. Representative examples of items and activities that can be incorporated into formal or informal approaches for assessing each of the listed physical fitness components include--<sup>1</sup>

### Agility

Leg Thrusts  
Shuttle Run  
Side Step  
Squat Thrusts/Burpee  
Zig-Zag Run

### Balance

Balance Board Activities  
Bass Stick Series  
Beam/Rail/Bench Walks  
Object Balance Activities

### Cardiorespiratory

#### Endurance

Bench Step  
Cycling  
Hiking  
Ice Skating  
Rope Jumping  
300 Yard Run  
600 Yard Run/Walk  
6-9-12 Minute Run  
1/2-1-1 1/2 Mile Runs  
Swimming Activities

### Explosive Power

#### Arms/Shoulders

Medicine Ball Throw  
Softball Throw  
Volleyball Throw

### Flexibility

Back Extension Activities  
Back Lifts  
Bend, Twist, and Touch  
Bob  
Floor Touch  
Head, Chest Raise (Prone Position)  
Lateral Bend  
Leg Raise (Prone Position)  
Trunk Flexion Activities  
Windmill

### General Coordination

Ball Bounce  
Roll Progression  
Rotor Pursuit Tracking  
Softball Throw  
Standing Long Jump  
Standing/Running High Jump

### Leg Power

Mountain Climber  
Squat Jump  
Standing High Jump  
Standing Long Jump  
Vertical Jump

<sup>1</sup> Refer to Special Olympics Instructional Manual--From Beginners to Champions (AAHPER Publication Sales, 1201 16th Street, N. W., Washington, D. C., 20036, Stock Number 245-25322, \$2.50) or any good text on physical fitness tests and measurement in physical education, or curriculum guide in physical education for clarification of listed test items and for additional ideas for developing innovative approaches for assessing physical fitness.

Muscular Endurance  
Abdominal

Curls  
Isokinetic Activities  
Leg Lifts  
Sit-Ups  
V-Sit

Physique

Classification Indexes  
Height  
Somatotyping  
Weight  
Wetzel Grid

Speed

Dashes (25 to 100 yard)  
8-second Dash  
Flying 20-30 yards

Strength

Dynamometer Items  
Hand Grip~  
Isometric Activities  
Isokinetic Activities  
Tensiometer

Adapting and Using the Youth Fitness Test

The AAHPER Youth Fitness Test and three modifications meet the intent of criteria found in rules and regulations for P. L. 94-142 and Section 504 regarding assessment of physical fitness. See the chart on page 12 for a breakdown of measured components of physical fitness, specific test items, and resource information for the Youth Fitness Test, Special Fitness Test for Mildly Mentally Retarded, Motor Fitness Test for Moderately Mentally Retarded and adaptations of the Youth Fitness Test for blind and partially sighted students.

At the present time no definitive norms or other standard measures have been developed or established for individuals with different physical or orthopedic conditions. This should not necessarily be looked upon as an adverse situation since differences among individuals with physical and orthopedic conditions are great. With great differences within categories of individuals with such conditions, validity of norms or standard scores could be seriously questioned. In addition, increased consideration must be given to using test results and other assessment information to identify strengths as well as weaknesses. Greater attention must be given to capitalizing on an individual's strengths so as to teach around weaknesses.

Most individuals are interested in how they are doing in comparison with their peers or in terms of standards. Various adaptations of procedures for administering different test batteries are suggested below to stimulate thought of individuals confronted with meeting needs of students with various handicapping conditions. For example--

- Use criterion referenced approaches where success is based on attaining certain performance levels over a given number of trials--i.e., perform standing long jump of one foot three times out of four attempts on three consecutive days; catch two out of three times a playground ball tossed at least ten feet high from a distance twenty-feet from the student.



# YOUTH FITNESS TEST AND ADAPTATIONS

Measured Component of Physical Fitness	Youth Fitness Test	Special Fitness Test for Mildly Mentally Retarded	Motor Fitness Test for Moderately Mentally Retarded	Adapted AAHPER Youth Fitness Test for Blind and Partially Sighted Students
Shoulder girdle muscular endurance	Pull-ups (boys) Flexed arm hang (girls)	Flexed arm hang	Flexed arm hang	*Pull-ups (boys) *Flexed arm hang (girls)
Abdominal muscular	Sit-ups (bent knee in one minute)	Sit-ups (straight leg in one minute)	Sit-ups (bent leg in 30 seconds)	*Sit-ups
Agility	Shuttle-run	Shuttle-run	-----	-----
Speed	50-yard dash	50-yard dash	50-yard dash	**50-yard dash
Cardiorespiratory endurance	600-yard run walk or 9 or 12 minute run or 1 or 1½ mile run	300-yard run-walk	300-yard run-walk	**600-yard run-walk
Leg power	Standing long jump for distance	Standing long jump for distance	Standing long jump for distance	*Standing long jump
Coordination and explosive power of arm and shoulder girdle	-----	Softball throw for distance	Softball throw for distance  Height, weight, sitting bob and reach, hopping, skipping, and a tumbling progression are also included	-----  *Regular Youth Fitness Test Norms are used **Special norms for blind and partially sighted students are used
Reference <sup>1,2</sup>	<u>AAHPER Youth Fitness Test Manual (\$2.50)</u>	<u>Special Fitness Test Manual for Mildly Mentally Retarded Persons (\$2.25)</u>	<u>Motor Fitness Testing Manual for the Moderately Mentally Retarded (\$3.95)</u>	<u>Physical Education and Recreation for the Visually Handicapped (\$3.25)</u>

<sup>1</sup>Each of these publications/manuals is available from AAHPER Publication Sales (1201 16th Street, N. W., Washington, D. C., 20036).

<sup>2</sup>See pages 7 to 9 for a listing of additional resources containing physical fitness batteries or information about instruments which can be used effectively with impaired, disabled, and handicapped persons.



- . Use mental age rather than chronological age when using norms or standard scores.
- . Reduce the number of test items which must be passed at a given performance level.
- . Use average percentile score rather than listed standard on the specified number of test items.
- . Change--lower or raise--percentile standards according to ability levels of individual participants.
- . Eliminate test items which are obviously unfair so that each participant has a chance to succeed and achieve--i.e., drop sit-ups for students with no functional use of abdominal muscles.
- . Group activities into two or three categories according to fitness characteristics--speed events, endurance activities, power items. Structure these so that individuals have to attain a minimum standard in a specific number of items from each category.
- . Reduce distances and adjust times to compare to norms or standard scores accordingly--i.e., run 25 yards, double time, and use regular norms for 50-yard dash for age of the individual.
- . Introduce scoring where an individual does ten (five, twenty) repetitions as fast as possible or does as many repetitions in ten (five, twenty) seconds as possible.
- . Use improvement in raw scores and/or percentile scores as base for assessment.
- . Substitute activities and items requiring the same basic skills, traits, and characteristics for those in the test battery--i.e., use a straight arm hang, straddle-chins, or straddle hang in place of the flexed arm hang. In such an approach, use criterion referenced approaches, improvement in raw scores, and/or develop local standard scores as criteria for assessment.
- . Substitute items such as squat thrusts and push-ups or basketball throw for shuttle-run and softball throw with blind and partially sighted students.
- . Substitute wheelchair or crutch dashes and shuttle-runs for sprints, run-walk, and shuttle-run events done by able-bodied individuals.
- . Introduce wheelchair slalom or obstacle course activities for shuttle-run as measures of agility.
- . Use combinations of the above suggestions. For example, when using mental age instead of chronological age, percentile standards may have to be raised from those recommended to challenge youngsters.

- . Develop original, innovative, and creative approaches to challenge youngsters through these activities.

### Motivation and Incentives

The key consideration is to make testing challenging so that each individual has a feeling of accomplishment and personal fulfillment when participating. While self-actualizing behavior is desirable, many individuals with different handicapping conditions may initially respond only to various types of external stimulation and extrinsic motivation. Behavior modification techniques have been used effectively when teaching various kinds of physical and motor skills. Although often thought of and used with severely and profoundly mentally retarded, multiply involved, and seriously emotionally disturbed individuals, behavior modification techniques can and have been used with most any group. Who has failed to notice buckeyes, stars, flags or other rewards on helmets of college football players?

Rewards of various types, including token economy systems, social reinforcement, praise, and verbal encouragement, can be used in shaping desired positive behaviors. Both research and experience have shown that many individuals initially participate for tangible rewards. However, feelings of success and personal achievement change ways in which these same individuals look upon activities. They become motivated by satisfactions derived from participation itself which makes them feel good about themselves. As a result extrinsic motivation through external and tangible rewards has been a means to an end. Self-actualizing behavior has resulted from intrinsic motivation based on internal satisfactions and personal accomplishments.

Research that goes back at least fifty years suggests that psychological and emotional factors influence physical and motor performances to a greater extent than motor ability and physical proficiency. Experience and observation reinforce these research findings. Therefore, type of motivation and incentive cannot be overlooked when planning assessment sessions and in interpreting their results. For example--

- . When an individual runs a 300-yard dash, we must look beyond the time to obtain the real significance of the performance. Results of individuals who understand this task and are highly motivated most nearly reflect combinations of speed and endurance required for high levels of performance in the 300-yard dash. However, performances of individuals who prefer being chased for 300-yards, or chasing someone over the distance, or in running with a partner, or who have to be dragged over the distance maybe more indicative of type and degree of motivation than speed and endurance. Therefore, results of physical and motor performance must be looked at critically to determine whether they reflect skill and ability or type and degree of motivation.
- . Individuals have increased distances in events such as the standing long jump by having to jump over a handkerchief or other object. Even these performances can be improved by having the individual jump over over a coin, especially when it can be kept by jumping over it!

Results on test batteries or specific test items of basic physical fitness components cannot be divorced or separated from the degree of motivation shown by participants. Motivation must be considered along with other factors such as activities, methods, and learning style as each child individualized education program is developed. No place is this more crucial than in all aspects of the assessment process.

Various specific motivational devices have been successfully used in physical education, recreation, and sports programs involving students with different handicapping conditions. These have included--

- . Ribbons awarded in special events, tournaments, or competitive activities, including fitness activities.
- . Pictures placed in a Hall of Fame for outstanding performances or achievements--best scores on each of the test items, record performances, special accomplishments.
- . Names listed and displayed in an Honor Roll for meeting certain standards of achievement--reaching given percentile levels on various test items; attaining specific times, distances, or heights in different activities; fulfilling specifically stated goals--running/wheeling a predetermined distance (50 or 100 miles cumulatively), participating so many hours, taking part in so many events.
- . Individuals wearing different color shirts, shorts, armbands, or other identifying devices as performances improve.
- . Individual and group projects in which the miles an individual, group, or class runs, jogs, cycles, or swims over a stated period of time are recorded on charts or graphs.
- . Certificates or cardboard crests given for meeting certain standards of achievement, for fulfilling stated goals or for improvement.
- . Cups or plaques presented for especially outstanding achievements or performances.
- . Tokens given for specific purposes--a specific number of tokens can be turned in for a larger and more tangible award.
- . Student assistant, junior leader, similar leadership positions given to individuals who attain certain standards or levels of achievement.

#### Award Systems

Award systems have been developed to recognize students who demonstrate by their test performances attainment of certain levels of physical fitness. Standards for three award levels in at least four programs are based on national norms. Awards are in the form of embroidered emblems designed to be worn on blazers, jackets, or sweaters. Award levels include--

AAHPER ACHIEVEMENT AWARD is for those who attain the 50th percentile for their age and sex on all six items of the Youth Fitness Test (five items on adapted version for blind and partially sighted students).

AAHPER MERIT AWARD is for those who attain the 80th percentile for their age and sex on all six items of the Youth Fitness Test (five items on adapted version for blind and partially sighted students).

PRESIDENTIAL PHYSICAL FITNESS AWARD is for those who attain the 85th percentile for their age and sex on all six items of the Youth Fitness Test--no exceptions are permitted at the present time.

AAHPER SPECIAL SILVER AWARD is for those who attain the 50th percentile for their age and sex on five of the seven items of the Special Fitness Test for Mildly Mentally Retarded or on five of the six items of the Motor Fitness Test for Moderately Mentally Retarded.

AAHPER SPECIAL GOLD AWARD is for those who attain the 75th percentile for their age and sex on five of the seven items on the Special Fitness Test for Mildly Mentally Retarded or five of the six items of the Motor Fitness Test for Moderately Mentally Retarded.

KENNEDY FOUNDATION CHAMP AWARD is for those who attain the 85th percentile for their age and sex on all seven items of the Special Fitness Test for Mildly Mentally Retarded or all six items of the Motor Fitness Test for Moderately Mentally Retarded--no exceptions are permitted at the present time.

AAHPER PROGRESS AWARD certificates are available to those who participate in any of these testing programs and who show improved performance.

While no modifications or changes of standards or criteria are currently permitted for Presidential or CHAMP Awards, flexible standards may be established locally for Achievement, Merit, Silver and Gold Awards. Major purposes of these tests and award systems are to motivate individuals to participate actively in physical education, recreation, and sport activities, and to give them feelings of accomplishment, success, and personal satisfaction. Important to attaining these goals is the very personal and individual challenge to achieve, and to reach concrete goals that are meaningful to the participant.

#### Testing Large Groups

A charge often leveled at American educators is that they spend disproportionate amounts of time testing--too often for the sake of testing alone! Requirements for valid and reliable assessment and evaluation under P.L. 94-142 and Section 504 could reinforce this charge unless teachers and leaders diligently work to meet the intent and letter of these legislative requirements. Generally valid and reliable assessment and evaluation approaches



must be used with individual students who come to physical education classes in groups of differing sizes and varying compositions. Some students may have to be evaluated on an individual basis, in special settings, and under specific conditions. In addition, various techniques and organizational approaches must be considered so that groups can be assessed effectively in ways that batteries themselves or individual test items do not lose validity or reliability!

The following suggestions for handling large groups are not all applicable to every testing situation. While some of these suggestions are appropriate for pre-assessment and diagnostic purposes, for determining intermediate progress and for post-assessment growth, other suggestions should be considered only for one of these purposes. Roles for and effects of these suggestions and related procedures on individual and group motivation cannot be minimized and must not be overlooked. The following suggestions are simply representative examples of how some teachers have successfully dealt with large groups in these situations without losing sight of individual needs. Readers are encouraged to use these examples as springboards for using creative thought and resourcefulness to meet specific needs of each student on an individual basis. You are encouraged to share these successful practices and ideas with others through AAHPER/IRUC, 1201 16th Street, N. W., Washington, D. C., 20036.

- . Divide class into squads or small groups so that two or more stations are being used at the same time for specific test items. Squads rotate from one station to another until all test items have been completed.
- . Divide class into squads or small groups and test one squad at a time on an entire battery or a certain number of test items. Rotate squads being tested with those not being tested which are taking part in specifically assigned activities. Use this same organizational pattern with individuals or portions of squads.
- . Divide class into pairs so that one student performs a specific test item while his/her partner scores that item. The two students reverse places to complete that test item, then move onto the next test item, and continue in the alternating performer-scorer/scorer performer pattern until all test items have been completed. In running events such as the 600-yard run-walk or one mile run, times are called out in one second intervals. Scoring partners listen for times called as running partners cross the finish line. In distance events such as nine or twelve minute runs, scoring partners mark where running partners were when completion of elapsed time is called or signal given to indicate end of running time. Distance measurements are computed to the point where each runner was at the end of the elapsed time. Running courses, whether inside or outside, can be marked in advance with a number of check points--every quarter, eighth, or sixteenth of a lap; every ten, twenty, or fifty yards. Accurate determinations of distances run in a given time can be obtained in a minimum of time by adding number of laps and portion of the next lap run.



- . Spread testing out over several days by including only one test item a day until all items are completed.
- . Use a developmental or criterion approach whereby an individual moves to the next level or task when he/she is observed as having satisfied the criterion while participating in regular program activities.
- . Use specific standards, criteria, or tasks which an individual contracts to fulfill as a means of assessing progress.
- . Use individual folders, progress sheets, profiles, or similar means to provide individualized programs, monitor progress and make appropriate changes in approaches and activities.
- . Adapt and apply circuit, station, or learning center approaches and techniques to assessment and evaluation processes and procedures.
- . Use pictures, drawings, and other graphic approaches so that nonreaders can participate actively in assessing their own progress in specific activities.
- . Use paraprofessional personnel, aides, student assistants, squad leaders, parent volunteers, high school students earning career education credit, college/university students in intern/practice teaching/field placement programs, and/or classroom teachers to obtain additional assistance when testing large groups. Provide necessary training, orientation and instruction to individuals assisting with tasks such as those found in assessment programs and activities.
- . Use reliable batteries and/or individual test items as a means of insuring accuracy and consistency when assistance is obtained in testing programs. Be sure that locally developed batteries and test items are objective and reliable.

### Record Keeping

Important to any assessment system is a procedure for scoring, tabulating, and recording data and information about specific aspects of individual performance. Regardless of ways in which classes are organized to reduce teacher-pupil ratio, careful attention to accurate record keeping is necessary. Systems and approaches must be functional, facilitate instruction, and contribute to fulfilling annual goals and short-term instructional objectives for each child. Maintaining records not conducive to these ends may be busy work and certainly makes it difficult to do the type of record keeping necessary for documentation required under P.L. 94-142 and Section 504. Depending upon needs and personal characteristics, information about a student's performance on specific test items can be presented in anyone of a number of ways. For example--

- . Present status in qualitative terms:

- slow, average, good, needs more training.
- pass, fail; yes, no; can, can't; plus, minus.
- adequate, educational care, referral care.
- cannot do, inadequate, adequate.
- unable, weak, average, strong.
- correct, hesitates.
- satisfactory, unsatisfactory.
- plus, satisfactory, needs improvement.

. Present status in quantitative terms:

- time for agility run, dash, endurance run, holding balance, hopping a given distance.
- distance walked on balance beam, jumped, run in a given time.
- number of pull-ups or sit-ups, times ball is bounced, objects picked up in a given time.
- rating according to predetermined scale based on specific criteria or standards.
- fulfillment of specific short-term instructional objectives expressed in criterion referenced or behavioral terms.

. Use line drawings, stick figures, or diagrams as a means by which non or poor readers can use the same materials and score cards as students who read. It is vital that levels of physical fitness and ability to perform motor tasks be accurately determined and not reflect general intelligence or specific academic skills.

. Use smiling, neutral or frowning faces to indicate achievement, progress, and fulfillment of short-term instructional objectives by an individual child.

. Group and present personal characteristics and basic behavior traits in different ways and various patterns:

- neurological organization, mobility, perceptual characteristics, agility, basic motor skills, fitness activities.
- functional concepts, physical education, play skills.
- body awareness, spatial relationships, axial movement, locomotor, gross agility, balance-posture, ball handling.
- hand-eye choice, jumping, hopping, angels in snow, balance beam/rail walking, skipping, swinging, identification.
- gross motor, sensory-motor integration, perceptual-motor skills, language development, conceptual skills, social skills.
- obstacle course, warm-ups, rhythms, hokey pokey, ball handling, kick ball, gunny sack relay.
- attitudes and habits, relaxation, general movement patterns, specific movement patterns, eye movement patterns, communication patterns, visualization patterns.
- agility, balance, body image, coordination, directionality, figure ground, laterality, reflex, shapes, tactile, vision.
- flexibility balance, power agility, strength, coordination, muscular endurance, cardiorespiratory endurance.

- . Group different numbers of specific tasks within each basic category or area depending upon characteristics and traits themselves and type of information needed about each participant.
- . Develop checklists and assessment records in ways that simple symbols, such as checks, lines, X's, O's, partial lines, can be used to indicate specific accomplishments and levels of progress.
- . Use numbers, letters, or combinations to indicate degree to which tasks have been performed or objectives accomplished.
- . Include information about attitudes and approaches of participants toward certain tasks and activities in addition to comments and information about performance of skills, movements, and patterns:
  - wouldn't try.
  - tried, failed, quit.
  - tried, failed several times, quit.
  - tried, continued to try and fail, had to be stopped.

In preparing these records, regardless of purposes which they are to be used, simplicity and flexibility are important considerations. Records need to be structured so that they can be used easily by individuals with diverse amounts of training, background, and experience; they must not require a lot of time to record information and results of observations. In addition, records must be functional so information can be applied and used as bases for improving program opportunities and experiences for each program participant. Flexibility is important so records can be used in ways or approaches best for a particular staff given program to meet unique needs of the population being served.

In preparing records, teachers/leaders should--

- . Be sure they provide and reflect information intended--no more, no less.
- . Recognize that activities or skills need to be assessed from simple to complex, easy to difficult. However, remember that a progression or sequence appropriate for one individual or most participants in a group is not necessarily effective with everyone--not everyone learns skills, particular patterns, specific movements, given tasks, or perceptual-motor activities in the same order or way; adjustments to individual needs are essential.
- . Be able to screen and assess performances of children throughout their educational careers. For example, an increasing number of schools have devised nursery, prechool, or kindergarten developmental profiles and perceptual-motor screening instruments which are administered to children before they start to school. Some screening procedures are helpful for grouping, planning, and making educated guesses with respect to strategies to help each youngster be successful and off on the right foot in school.
- . Be able to determine which boys and girls need supplementary assistance beyond and in addition to regular class programs and which youngsters may require specialized and more formal testing.

- . Be able to consider activities and programs designed to meet specific needs of children various aspects of physical education, recreation, and related activities.
- . Demonstrate that formal testing and informal assessment are vital components of the teaching-learning process. No program should become a slave to testing--tests should not be administered solely for the sake of testing and data gathering.